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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/643,491	08/19/2003	Jurgen Allgaier	05899-00016-US	5428
23416	7590	06/13/2006		
CONNOLLY BOVE LODGE & HUTZ, LLP P O BOX 2207 WILMINGTON, DE 19899			EXAMINER WEBB, GREGORY E	
			ART UNIT	PAPER NUMBER

1751

DATE MAILED: 06/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/643,491

Applicant(s)

ALLGAIER ET AL.

Examiner

Gregory E. Webb

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 23 March 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 28-33 and 36-47 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☒ Claim(s) 33 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                                   | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>0905</u> .  | 6) <input type="checkbox"/> Other: _____                                    |

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## **DETAILED ACTION**

### ***Response to Arguments***

Applicant's arguments filed 3/23/06 have been fully considered but they are not persuasive.

Concerning the Southwick '795 reference, the applicant admits that Southwick teaches a BC copolymer containing B as the diene of the block copolymer. The applicant then argues that this BC copolymer containing diene is different from the AB copolymer containing diene.

A variable is an abstraction which represents something in reality. In this case A, B, and C are variables which represent a monomers within a polymer. Assigning variable names is rather an arbitrary process usually taking the first letter of the alphabet to represent the first abstraction.

However, it would be just as valid to say that the prior art copolymer or the instant copolymers were XZ block copolymers as long as XZ represented an equivalent structure to AB. Thus as these are just abstract variables, such representations either AB or BC would be equivalent.

Such changes in variable names inherently reads on variations in the variable's name. In other words, an AB block copolymer is the same as BC, CD, DE, EF, etc. block copolymers.

The examiner agrees that the remainder of the references do not teach the applicant's newly amended claims and newly added claims. As such previous rejections over Daniel '104, Southwick '979 and Hartmann '190 are withdrawn.

Previous rejections based on Southwick '795 are maintained.

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***Claim Rejections - 35 USC § 102***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 28-32, 36-47 are rejected under 35 U.S.C. 102(b) as being anticipated by Southwick, Jeffrey G. (US5292795).

Concerning the surfactant, Southwick, Jeffrey G. teaches the following:

Specific examples of surfactants which are useful herein include Neodol.RTM. 25-S, Neodol.RTM. 23-3S, Neodol.RTM. 23-9S, Neodol.RTM. 45-S, Alipal.RTM. EP-110, Alipal.RTM. EP-120, Calsoft F90, Nkal.RTM. BA-77, Emcol 4500, octyl phenol **ethoxylates** having 1 to 35 **ethylene oxide** groups and nonyl phenol **ethoxylates** having 1 to 35 **ethylene oxide** groups such as the Igepal.RTM. CA and CO series sold commercially by Rhone-Poulenc. Water soluble nonionic block **copolymers** are also frequently used to stabilize latexes. Examples of the latter include the Synperonic T range of polypropylene **oxide - polyethylene oxide** block **copolymers** from ICI. (*emphasis added*)

Concerning the ABA, Southwick, Jeffrey G. teaches the following:

The preferred base polymers of the present invention are block copolymers of conjugated dienes, acrylic monomers such as alkyl methacrylates or their derivatives and vinyl aromatic hydrocarbons. Such block copolymers may be multiblock copolymers of varying structures containing various ratios of the monomers including those containing up to about 60% by weight of vinyl aromatic hydrocarbon. At higher vinyl aromatic hydrocarbon contents, the polymers are not elastomeric and would not be useful for adhesives, sealants and flexible coatings. Thus, multiblock copolymers may be utilized which are linear or radial, symmetric or asymmetric, and which have structures represented by the formulae, ABAC, ABC, **BC**, BAC, CABAC, **CBC**, (CB).sub.n X, (BC).sub.n X, (CB).sub.n XA.sub.m, (BC).sub.n XA.sub.m, (CB).sub.n XB.sub.m, (BC).sub.n XB.sub.m, etc. where A is the vinyl aromatic hydrocarbon, B is the diene, C is the acrylic monomer, X is a coupling agent and n and m are integers from 1 to 50. These are just some of the structures possible. Their finite number is not meant to limit the scope of the invention. It is not necessary but B can be a polymer block of a **conjugated diene** that has been hydrogenated. Hydrogenation of the diene is preferred in applications requiring superior thermal stability. (*emphasis added*)

Concerning the polydiene, polydiene and the 1,3-butadiene, Southwick, Jeffrey G. teaches the following:

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Conjugated dienes which may be utilized to prepare the polymers and copolymers include those having from 4 to 8 carbon atoms and also include 1,3-**butadiene**, 2-methyl-1,3-**butadiene(isoprene)**, 2,3-dimethyl-1,3-**butadiene**, 1,3-**pentadiene**, 1,3-**hexadiene** and the like. Mixtures of such conjugated dienes may also be used. The preferred conjugated dienes are 1,3-**butadiene** and **isoprene**. (*emphasis added*)

Concerning the microemulsion, stabilizing and the emulsion stabilization, Southwick, Jeffrey G. teaches the following:

In a preferred embodiment of the present invention, a cosolvent is present in the cement to assist in making **very fine stable** dispersions or **emulsions** as described in copending commonly assigned application "Process for Making Submicron Stable Latexes of Block Copolymers", filed concurrently herewith. The cosolvent should be used in an amount from 5 weight percent to 50 weight percent of the total solvent in the cement. If less than that amount is used, then there will be little effect on **emulsion** droplet size and therefore, on latex particle size, and if more is used, then the copolymer will be insufficiently solubilized in the solvent/cosolvent blend and **unstable emulsions** will be formed. The cosolvent should be chosen on the basis of its compatibility with or affinity for the particular polymer which is to be emulsified. In the case of the present polymers containing polar functional groups, the cosolvent should be polar in nature because this effectively reduces the viscosity of the cement at a given polymer level. Examples of cosolvents which are polar in nature include isopropyl alcohol, methyl ethyl ketone, acetone, isobutyl isobutyrate, ethyl acetate, methyl isobutyl ketone, n-butyl alcohol and isopropyl acetate. (*emphasis added*)

Concerning the molecular weight, Southwick, Jeffrey G. teaches the following:

The **molecular weights** of these polymers may range from 1000 to 1,000,000, preferably from 20,000 to 200,000. The vinyl aromatic hydrocarbon block **molecular weight** generally ranges from 4,000 to 30,000 and the conjugated diolefin block **molecular weight** generally ranges from 20,000 to 175,000. The **molecular weight** of the acrylic monomer block should be in the range from 142 to 30,000 because 142 represents the **molecular weight** of one unit and **molecular weights** greater than 30,000 may form blocks that are so large that their diffusion to the solid-aqueous interface is impaired. (*emphasis added*)

Concerning claim 28, the prior art copolymer would inherently possess the solubility of instant claim 28 as the polymer structures (i.e. block B) are identical.

Concerning the intended use claims 43-47, the prior art composition would inherently possess the ability to be used for a variety of intended uses.

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Concerning the molecular weight of claims 31-32, as the blocks claimed are identical, such properties as molecular weight would be inherent.

***Allowable Subject Matter***

Claim 33 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The prior art fails to teach or suggest the specific block copolymer of claim 33 used in a microemulsion. Specifically the prior art fails to teach the use of polyethylene oxide as in combination with the diene to form the instant copolymer.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregory E. Webb whose telephone number is 571-272-1325. The examiner can normally be reached on 9:00-17:30 (m-f).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglass McGinty can be reached on (571)272-1029. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

A handwritten signature in black ink, appearing to read 'G Webb', with a stylized, cursive script.

Gregory E. Webb  
Primary Examiner  
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gew